

AMENDMENTS TO THE CLAIMS

Presented below is a complete set of claims with current status indicators.

1. – 19. (previously canceled)

20. (currently amended) An output circuit for use in an implantable cardiac device comprising:

an output adapted for connection across a load;

a charging circuit;

a first capacitor switchably coupled between the charging circuit and the output;

a second capacitor switchably coupled across the first capacitor and the output;

a pulse-width modulation circuit that generates [[a]] first and second pulse-width modulation control signal signals corresponding to a desired waveform; [[and]]

a polarity control circuit that generates first and second polarity control signals;

an H-bridge including a first leg and a second leg, each leg including a pulse-width modulation control-device switch and a polarity switch, wherein:

the pulse-width modulation switches are configured to receive [[the]] a respective one of the first and second pulse-width modulation control signal signals, and alternately switch between a closed state and an open state in response to the pulse-width modulation control signal; and

the polarity switches are configured to receive a respective one of the first and second polarity control signals and switch between a closed state and an open state in response to the polarity control signal; and [[, wherein:]]

a controller programmed to:

control the polarity control circuit to generate first and second polarity control signals whereby the polarity switch of the first leg is closed and the polarity switch of the second leg is open, and control the pulse-width modulation circuit to generate first and second pulse-width modulation control signals whereby the pulse width modulation switch of the first leg is open and the pulse width modulation switch of the second leg is closed, and when the control device is in a closed state, the first

capacitor is thereby electrically coupled across the second capacitor and the output in a first polarity; and

while the first capacitor is electrically coupled across the second capacitor and the output in the first polarity, further control the pulse-width modulation circuit to generate pulse-width modulation control signals whereby the pulse width modulation switch of the second leg is toggled between open, whereby when the control device is in an open state, the first capacitor is electrically decoupled across the second capacitor and the output, and the second capacitor is electrically coupled across the output, and closed, whereby the first capacitor is electrically coupled across the second capacitor and the output.

21. – 24. (canceled)

25. (currently amended) The output circuit of claim 22 wherein the second capacitor is arranged to receive current from the first capacitor when the control device is closed and the first capacitor is electrically coupled across the second capacitor and the output and to supply current to the output when the control device is open and the first capacitor is electrically decoupled across the output.

26. (previously presented) The output circuit of claim 25 wherein the second capacitor is a non-polar capacitor.

27. (new) The output circuit of claim 20 wherein the second pulse-width modulation control signal comprises a pulse train of pulses for toggling the pulse width modulation switch of the second leg between open and closed.

28. (new) The output circuit of claim 27 wherein the pulses having varying duty cycles.

29. (new) The output circuit of claim 20 wherein the controller is further programmed to:

control the polarity control circuit to generate first and second polarity control signals whereby the polarity switch of the first leg is open and the polarity switch of the second leg is closed, and control the pulse-width modulation circuit to generate first and

second pulse-width modulation control signals whereby the pulse width modulation switch of the first leg is closed and the pulse width modulation switch of the second leg is open, and the first capacitor is thereby electrically coupled across the second capacitor and the output in a second polarity different from the first polarity; and

while the first capacitor is electrically coupled across the second capacitor and the output in the second polarity, further control the pulse-width modulation circuit to generate pulse-width modulation control signals whereby the pulse width modulation switch of the first leg is toggled between open, whereby the first capacitor is electrically decoupled across the second capacitor and the output, and the second capacitor is electrically coupled across the output, and closed, whereby the first capacitor is electrically coupled across the second capacitor and the output.